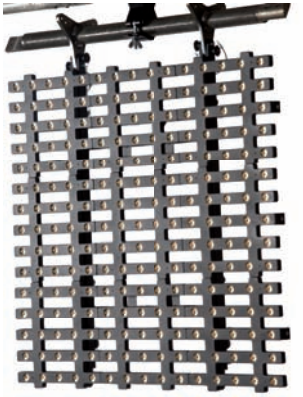
elidy

the led scream



User Manual
V2.2

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Issue	***Change***	***First issue: 121120***
V2.0	Base	121122
V2.1	Lightened base	121123
V2.2	Base for translation	121125
V2.3	English version	

Hello,

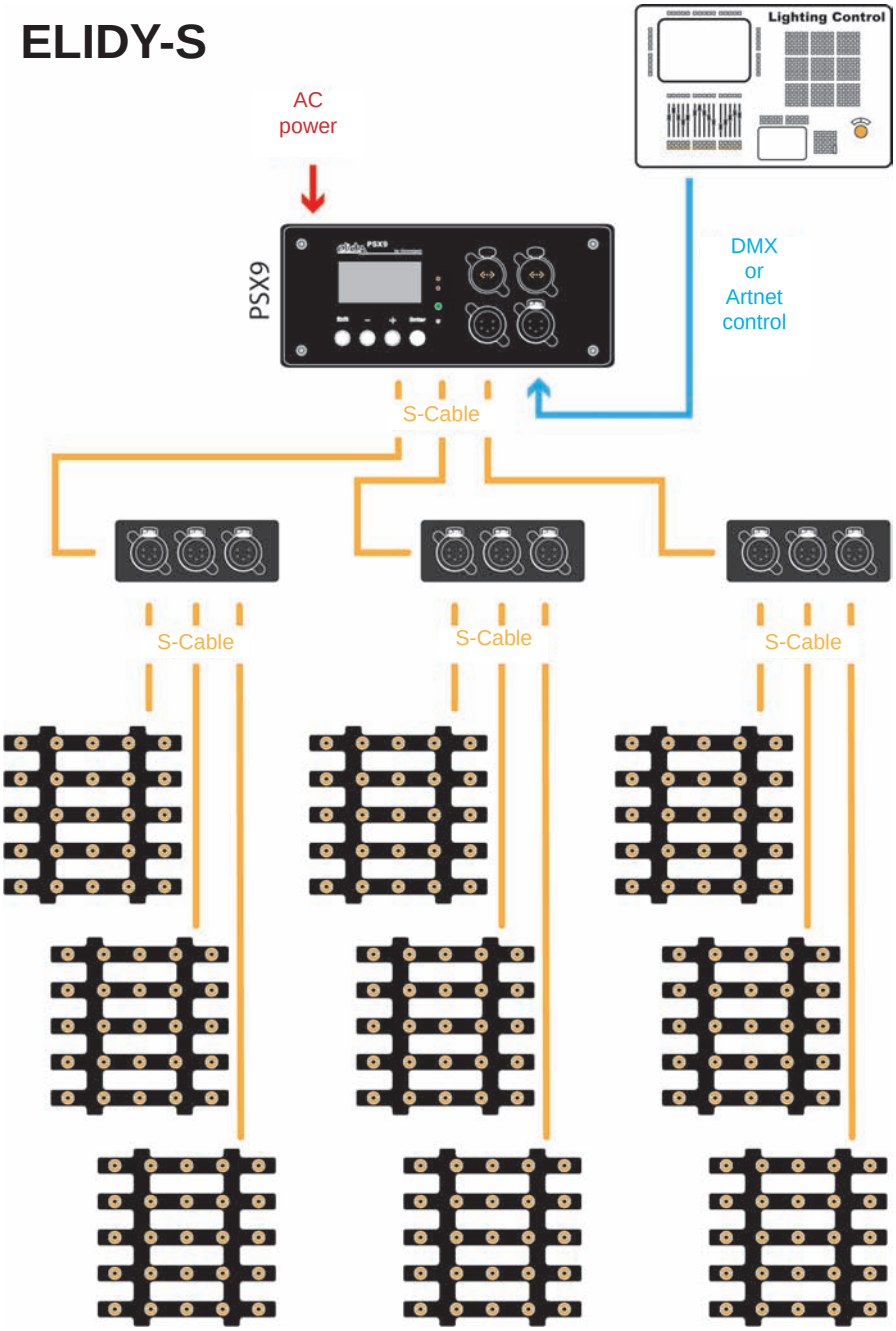
Thank you for using our equipment and for your confidence in us.

We endeavour to provide you with high quality equipment which is reliable and easy to use. We hope we meet your expectations.
If, however, you find defects or malfunctions, we will be very happy to resolve any problems for you as quickly as possible.

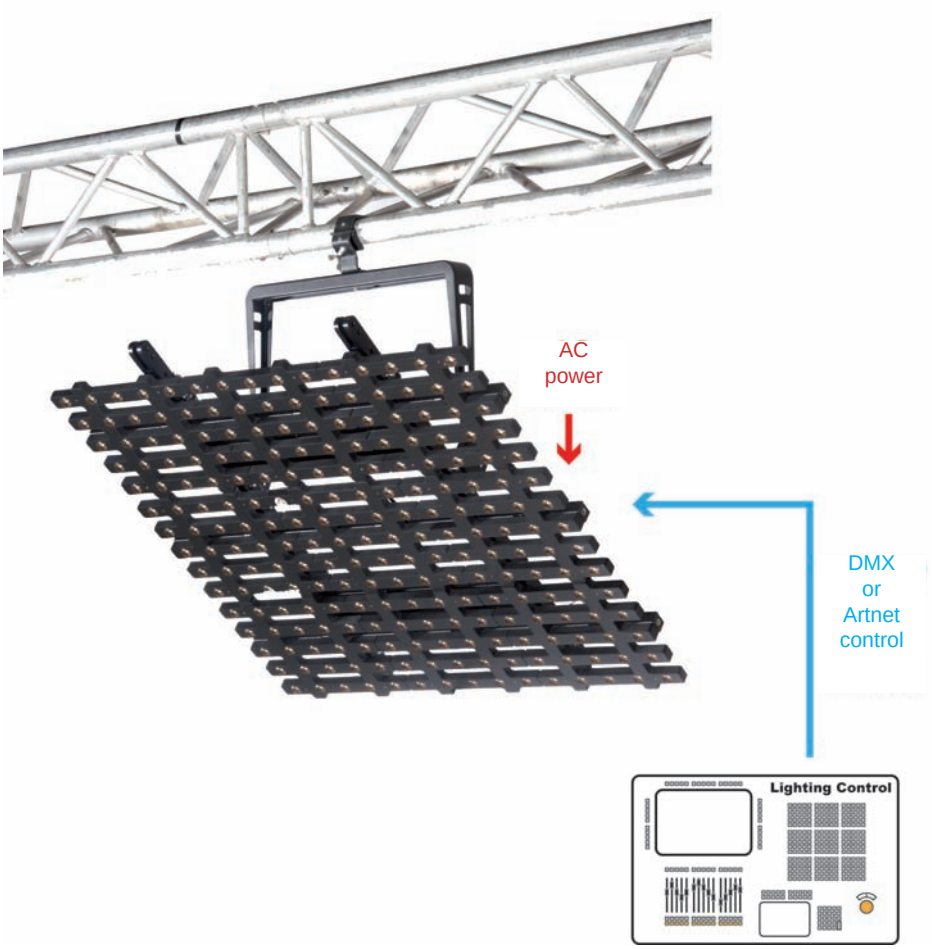
This user manual relates to all products in the Elidy range.

For your safety, please read this manual carefully before using the equipment for the first time.

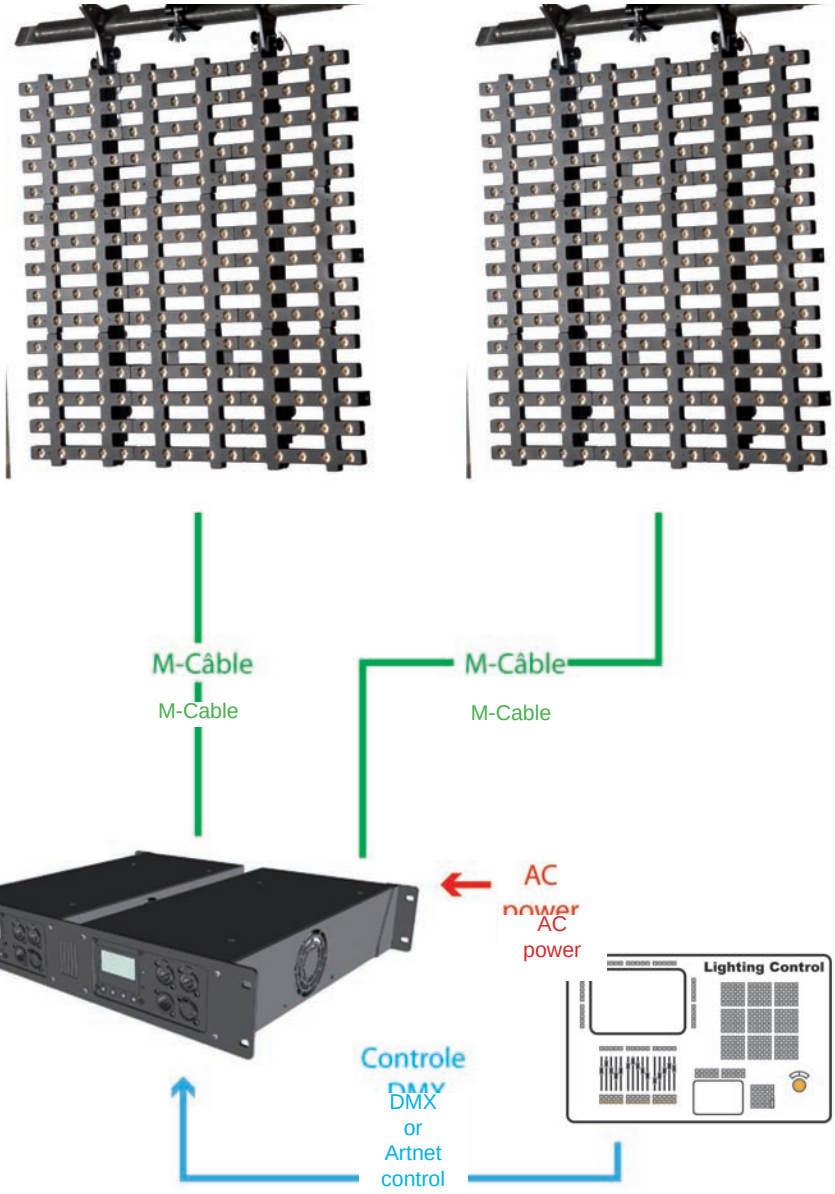
ELIDY-S


Lighting Control
AC
power
PSX9
DMX
or
Artnet
control
S-Cable
S-Cable
S-Cable
S-Cable

ELIDY-BIG



ELIDY-WALL


M-Câble
M-Cable
M-Câble
M-Cable
AC
power
AC
power
Lighting Control
Controle
DMX
DMX
or
Artnet
control

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Safety rules and precautions for use

Introduction

N.B.
For your safety and that of others, it is essential you read this manually carefully and follow the instructions closely.

N.B.
This equipment is reserved for professional use. It is not intended for domestic use. This product can cause serious, indeed fatal, injuries by fire, electrocution and falling from height. Only experienced and qualified users are allowed to install and use products in CHROMLECH's Elidy ranges.
Do not allow inexperienced persons to handle the products.

Before using for the first time, ensure the product has not suffered any damage during transit. If so, DO NOT USE the product and contact your CHROMLECH dealer.

In all cases, always inspect the mechanical and electrical parts of Elidy equipment before fitting to check they are not damaged.
In particular, check the lifting points, locking pins and connectors.
If there is any doubt that one of these parts may be damaged or faulty, DO NOT USE THE PARTS CONCERNED and contact your dealer.

The manufacturer cannot be held liable for damages caused by non-compliance with safety, installation and fitting instructions contained in this manual or by any modifications made to products in the Elidy range. Non-compliance with safety, installation and fitting instructions or any modifications made to products in the Elidy range will nullify the warranty.

Products in CHROMLECH's Elidy range comply with EC standard.

Electrical safety

N.B.
RISK OF ELECTRIC SHOCKS. ALWAYS DISCONNECT EQUIPMENT BEFORE HANDLING OR CARRYING OUT MAINTENANCE

Check that your electrical installation complies with current standards.

Always connect the product to electrical ground.

The PSX 9 power unit must be connected directly to the mains (100-240 VAC~ / 50-60 Hz).
DO NOT CONNECT TO AN ELECTRONIC OUTPUT (dimmer, solid-state relay, etc.).

Do not connect any device other than the PSX9 power unit to the power supply repeater socket.

Ensure the repeater power supply is not overloaded (MAX 16 A).

To ensure the PSX9 power unit operates satisfactorily, be careful not to obstruct the ventilation grilles.

The Elidy-S, WALL and BIG products need a hybrid power cable designed by CHROMLECH to operate. This cable is not supplied with the product and is available as an optional extra in a wide variety of lengths. CHROMLECH declines any liability if other cables are used to operate products in the Elidy range.

Installation

Products must be installed according to "best practice" by qualified and certified personnel.

Installation personnel should wear statutory safety equipment while putting up and taking down the system.

Ensure that the public and personnel are prevented from passing underneath the system while it is being rigged. The rigging area must be cordoned off and inaccessible to the public.

Never leave the rigging system unattended during installation.

Do not allow anybody, whether stage hands, artistes or members of the public, to climb, jump or hang from products in the Elidy range.

Do not place any object, however small, on the equipment during rigging. It may fall while the equipment is being suspended and cause personal injury.

NEVER attach any equipment other than CHROMLECH accessories to Elidy products.

CHROMLECH is not liable for rigging accessories that are not manufactured by CHROMLECH.

The safety cable (not supplied) must have a suitable SWL for the weight of the device you wish to secure. The safety cable, which must be attached correctly to the device and the support frame, must be installed so that if the main support system fails, the fall of the device will be limited as much as possible. If a safety cable comes into play following a fall, IT IS ESSENTIAL to replace it.

Take the same care when taking the system down as when installing it. Pack it away carefully after use.

Further information

The protection rating for products in the Elidy range is IP 32.
PRODUCTS IN THE ELIDY RANGE MUST NOT BE USED OUTSIDE WITHOUT PROTECTION FROM THE WEATHER.

Risk to the eyes. Products in the Elidy range use high-power LED (Light Emitting Diode) light sources. As such you are strongly advised not to look directly at the light source. Prolonged exposure can cause ocular lesions.

Devices must not come into contact with a flammable surface. In all cases, comply with a distance of at least 200 mm between the devices and nearby flammable surfaces.

All information provided in this manual is liable to change without notice. It is your responsibility to check for updates to this manual.

CHROMLECH reserves the right to modify and improve any aspect of the products in its range over time without being obliged to incorporate these modifications into products sold previously.

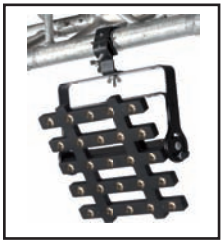
It is strictly prohibited to put products in the Elidy range in a washing machine and even less in a microwave oven ...

Elidy-S / Rigging system

The Elidy-S is an array fitted with a swivelling double yoke.

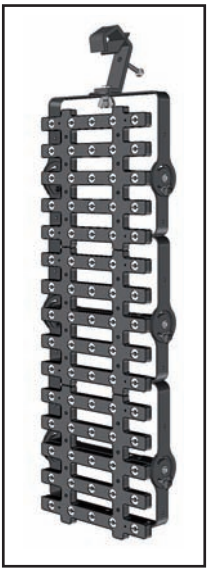
The Elidy-S yoke has 4 main functions:

1- Attach the Elidy-S by means of a standard proprietary hook



Diameter of through hole for hook: 13 mm (see drawing).
The hook must be able to support the weight of the Elidy-S, namely 3.1 Kg.

A safety sling must be used between the array and the rigging component.



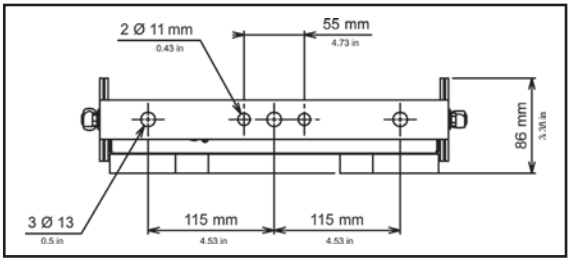
2- Attach to another Elidy-S in order to create a ladder of up to three Elidy-Ss suspended one underneath the other
Assembly is by means of two M10 nuts/bolts
inserted into the external drilled holes of the yoke. ***(see drawing)***

A safety sling must be used between arrays and the rigging component

3- Install the Elidy-S on the ground

Through its double yoke, the Elidy-S may be placed on the ground and very simply swivelled into any position.

4- Install the Elidy-S on a standard proprietary mount



Elidy-S / Connections

The Elidy-S most only be powered from a PSX9 power unit.

You must use only CHROMLECH cables (M-cable, S-cable).

Input connector:
The Elidy-S is fitted with one XLR 4 input connector.
Pinouts:

1	Power Gnd
2	DMX -
3	DMX +
4	Power 48V

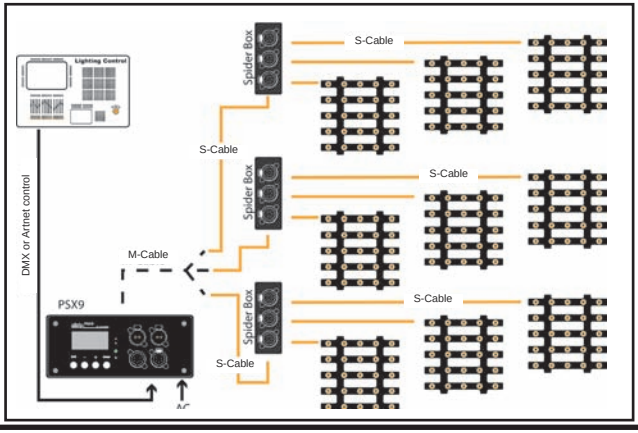
Cable characteristics:

Power supply: 2 x 2mm²
Data: Screened twisted pair 2 x 0.35mm²

It is possible to connect 3 Elidy-Ss onto each of the 3 PSX9 power outputs, i.e. 9 Elidy-Ss maximum per PSX9.

To this end, use the SPIDER BOX tapoff boxes provided for this purpose.
N.B.:
- Never connect more than 3 Elidy-Ss per PSX9 output.
- Do not exceed a total length of 25 m between the PSX9 and the Elidy-S.
- Do not chain more than 2 SPIDER BOXes

Functional diagram:



Elidy-BIG / Rigging

The Elidy-BIG is an array fitted with a swivelling yoke.

The yoke can be removed. It is fitted to the frame using the 4 screws provided.

A suitable safety sling must be used between the array and the rigging component.

Yoke mounting

The yoke allows the Elidy-BIG to be attached to any type of framework using standard hooks so that it can be panned and tilted easily.

N.B.

The yoke of the Elidy-BIG has been designed to support a frame and its 9 ACTIVE TILES

DO NOT HOOK OTHER FRAMES UNDERNEATH.

UNDER NO CIRCUMSTANCES MAY THE YOKE REPLACE A SPREADER BAR ("BUMPER").

Elidy-BIG / Connections

Fit the PSX9 power unit onto the frame using the support plate provided.
Connect the 3 outputs (XLR 4) of the PSX 9 to the 3 inputs (XLR 4) on the frame.
Connect the PSX 9 power unit to the mains (100 -230V / 50-60Hz / 3.5A / 800W).
Connect the DMX or Ethernet cable.

You can, if you want, install the PSX9 remotely using an M-Cable.

Elidy-WALL / Rigging

Elidy-WALL Rigging

The Elidy-WALLs have been designed to be assembled VERTICALLY very quickly.
You can assemble up to 11 Elidy-WALLs one underneath the other (MAX 10 meters).
All the parts necessary for fitting are integrated in the frame of the Elidy-WALL.
However, it is essential to use the Elidy-BUMPER spreader bar provided to start assembling each column.
1 COLUMN = 1 ELIDY-BUMPER.

1- Fitting the Elidy-BUMPER

- Rigging must be carried out by qualified personnel (for more information refer to chapter "Safety rules and precautions for use").

- Ensure that the support on which the Elidy-WALL is to be rigged can support the load, is in a good state of repair, stable and made safe.
In all cases, YOU ARE FULLY LIABLE FOR THE SUPPORTING FRAME ON WHICH THE ELIDY-WALLS ARE MOUNTED.

The Elidy-BUMPERs must be fixed to the supporting frame using 2 double collars, diameter 50 mm (not supplied). These double collars must have an SWL suited to the height and weight of your column.
1 ELIDY-WALL = 30 Kgs (including power supply and cabling)
11 ELIDY-WALL = 330 Kgs.

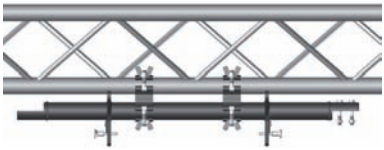
We recommend you begin assembling your wall with the central Elidy-BUMPER.

This will ensure your rig is centred correctly.

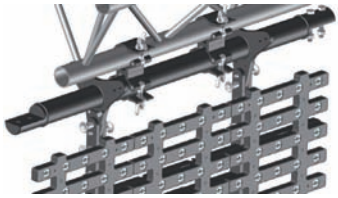
Then place the Elidy-BUMPERs either side of your reference point to form your first row.

Elidy-WALL/ Rigging

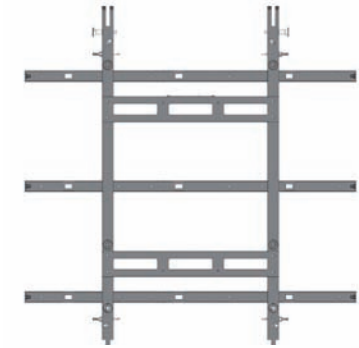
The ideal collar location on the Elidy-BUMPER is as follows:



However, it may not be possible to produce this configuration. In this case, you can move the collars on the Elidy-BUMPER. However, you must ensure the collars are installed within the male clevises.



Check the Elidy-BUMPER is orientated correctly. The clevis stops and quick-release pins must be pointing downwards.



To fit the Elidy-BUMPERs to each other, you must use the bolts provided. For assembly in a row, lock the 2 bolts as indicated below.

You can also place the Elidy-BUMPERs off-centre, to create different orientation angles.
To do this, you must only use one of the two bolts and space out the ends of each Elidy-BUMPER.

Now you have created your Elidy-BUMPER row, you can assemble the Elidy-WALLs underneath.

Elidy-WALL/ Rigging

Elidy-WALL consists of 9 Active panels and 1 Frame.
Its works with 1 PSX9, 1 M-cable or 3 S-cables, 1 Bumper for each Elidy-WALL column.

- 2 people are required to correctly assemble the Elidy-WALLs on the Elidy-BUMPERs. Stand either side of the array to move and lock it.

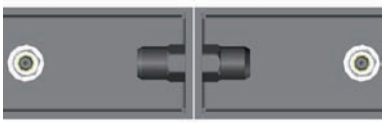
- You can grip the Elidy-WALL anywhere. All components can support the weight of the array.

- Ensure your Elidy-WALL is orientated correctly. The female clevises of the load bearing components must be facing upwards and the connectors downwards.

- N.B. the Elidy-WALLs are assembled vertically using the 2 load bearing components provided.

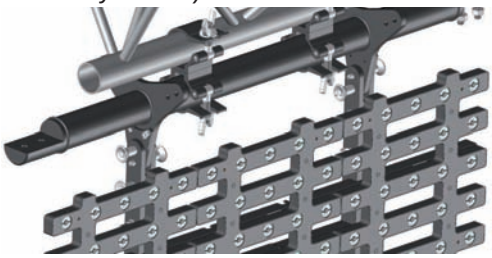
- The 3 transverse bars are only used for fixing the active tiles.

THE TRANSVERSE BARS ARE NOT A LOAD BEARING FRAME

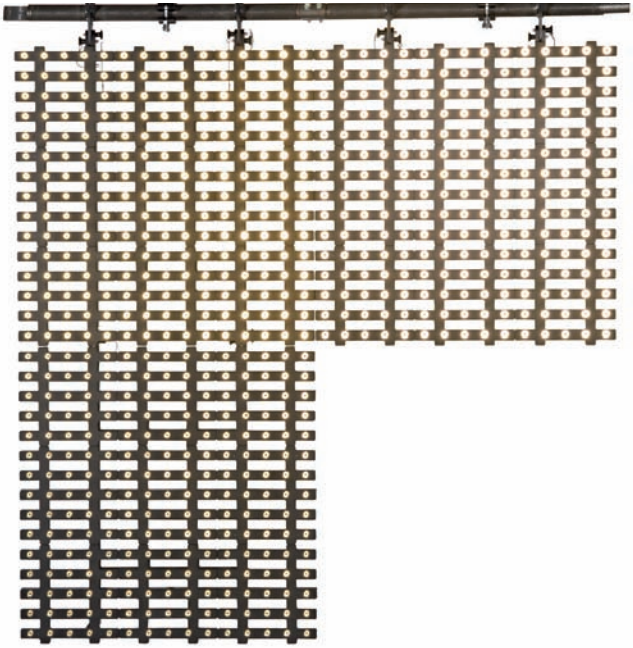


To insert or unhook the detent pins, you must press the red pushbutton fully down to unlock the safety device.

Start by assembling the central Elidy-WALL.
Insert the female clevises of the Elidy-WALL on the male clevises of the Elidy-BUMPER, up to the stops provided.
Lock the assembly using the 4 detent pins
(2 on the Elidy-BUMPER, 2 on the Elidy-WALL).



Repeat the operation up to your first row.



To finish off, wire up the Elidy-WALLs, secure them, raise your supporting frame by 1 m and start work on the next row.

Elidy-WALL / Connections

The Elidy-WALL must only be powered from a PSX9 power unit.

You must use only CHROMLECH cables (M-cable, S-cable).

Input connector:
The Elidy-WALL is fitted with 3 XLR 4 input connectors.

Pinouts:

1	Power Gnd
2	DMX -
3	DMX +
4	Power 48V

Cable characteristics:
Power supply: 2 x 2mm²
Data: Screened twisted pair 2 x 0.35mm²

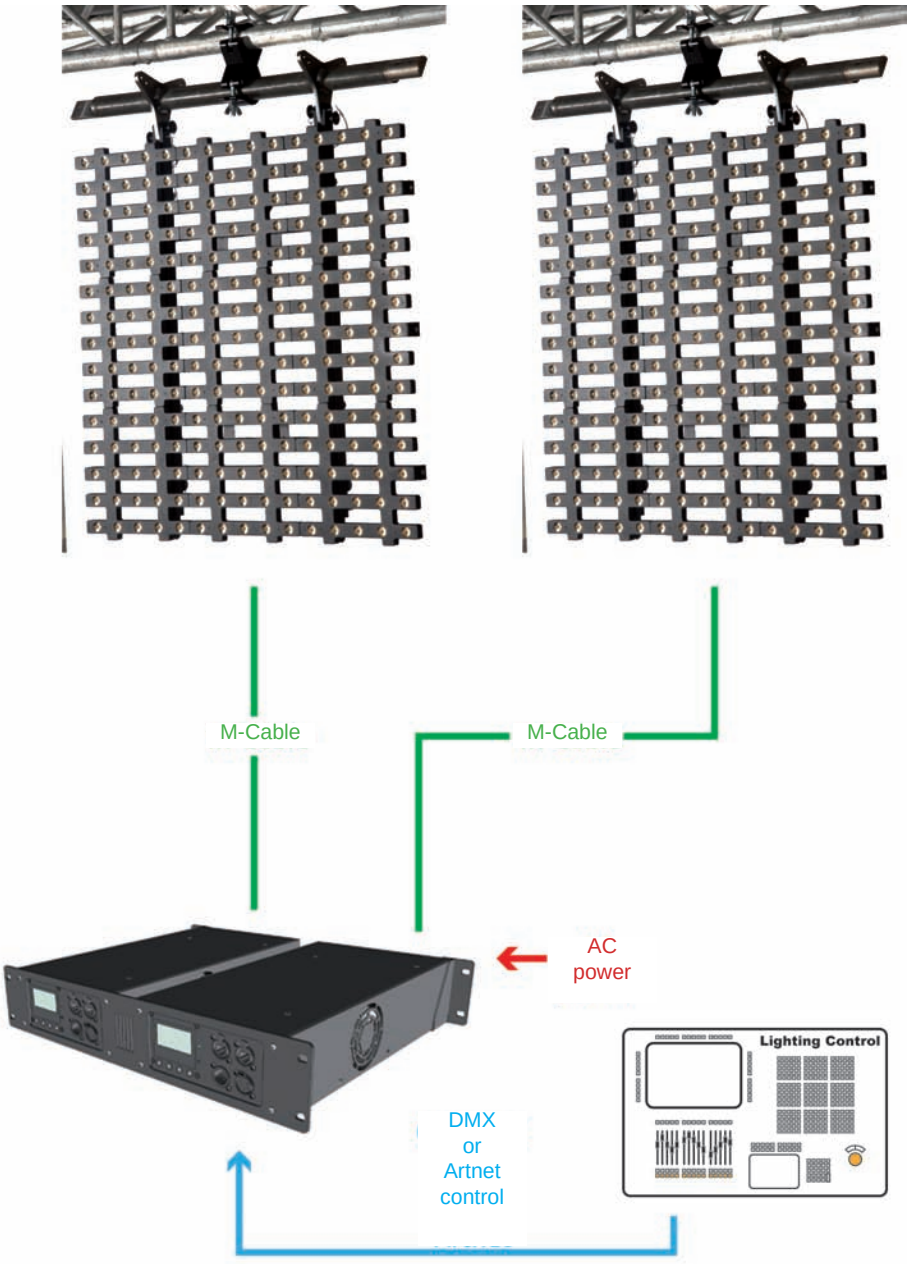
1 ELIDY-WALL = 1 PSX9

Connect the cable bundles from the frame to the PSX9 power unit

Different configurations are possible.

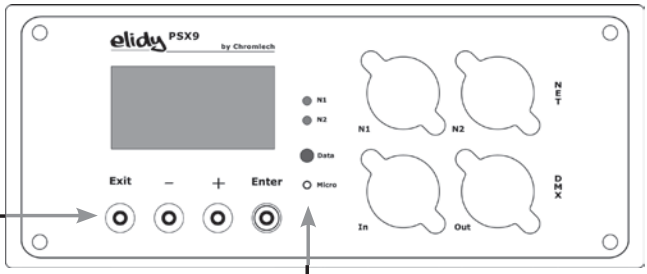
1- PSX9 on the frame
2- PSX9 installed remotely on a bridge above the screen (25m max.)
3- PSX9 installed remotely on the ground in a rack provided for this purpose (25m max.)

Functional diagrams



Power unit / Detail of buttons and menu

Front panel



RJ45 network connectors
On Neutrik socket base
ARTNET control: splitter type link for "easy chain" chaining
Power supply configuration: link to web browser

DMX type XLR5 connectors
On Neutrik socket base
DMX input and output

Information:

	On	Red	Green	Slow flashing
LED Network 1	Network present (link)	X	X	X
LED Network 2	Network present (link)	X	X	X
LED DATA	PSX9 energised	No DATA	DATA OK (DMX or Artnet)	Fault
MICRO	X	X	X	X

Key functions:

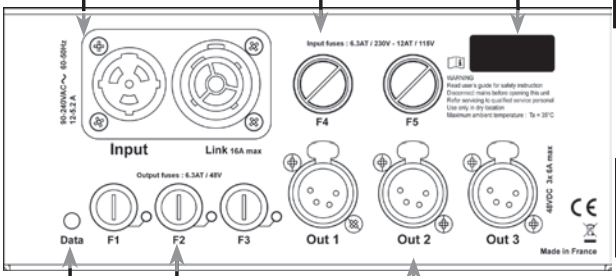
Screen interface	Menu function		Setting function	
Exit	Return to previous menu	←	Cancel setting	**X**
-	Previous row	↑	Decrement value	**-**
+	Next row	↓	Increment value	**+**
Enter	Enter menu	→	Confirm setting	**OK**

Depending on the context, these keys also have an alternative function:

Keys	Homepage	Menu	Adjust value
-	Shortcut to configuration view		
+	Shortcut to output status view		
- & + (Press simultaneously)		Return to the screen	Return to the Min. value

Power unit / Detail of buttons and menu

Rear panel



**Connectors from the mains supply of the PSX9 power unit.
"Powercon True-One" connectors, 1 Input / 1 Output (option to cascade PSX9 power units up to 16 A max).**

Input protection fuses, mains supply to the PSX9 power unit.

Serial number of the PSX9 power unit.

XLR 4 connectors on Neutrik socket base to provide the Elidy tiles with electrical and data power

Protection fuses for outputs, 48V power supply and DMX for Elidy tiles. The indicator LED lights up (red) if the fuse is out of action.

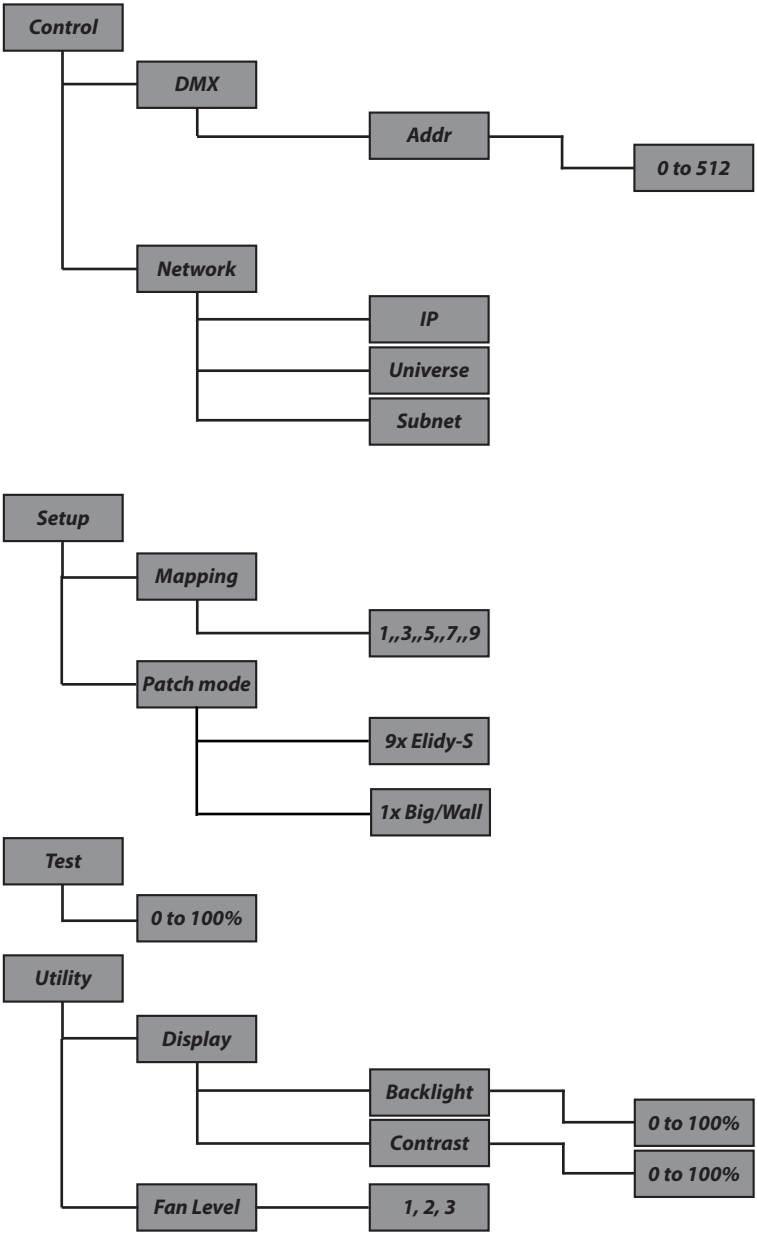
LED DATA, copy of LED DATA on the front panel (see table on previous page).

N.B.

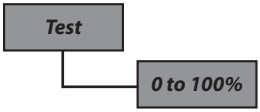
The number of the outputs is for information only, you can reverse them without affecting the operation of the Elidy arrays.

1 Output = 3 ACTIVE TILES Max.

Menu detail


Control
DMX
Addr
0 to 512
Network
IP
Universe
Subnet
Setup
Mapping
1,,3,,5,,7,,9
Patch mode
9x Elidy-S
1x Big/Wall
Test
0 to 100%
Utility
Display
Backlight
0 to 100%
Contrast
0 to 100%
Fan Level
1, 2, 3

Test Menu



This function lets you directly control (without a DMX or ARTNET signal) the brightness of your Elidy arrays.

This way you can easily check if your PSX9 power unit is correctly connected to your Elidy arrays.

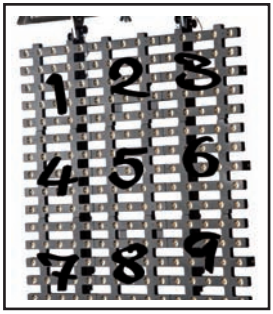
Once you are in the menu, press ENTER.
Use the + and - keys to adjust the output level from 0 to 100%.
Press ENTER to leave the menu.

Introduction

A PSX9 can operate up to 9 active tiles.
These active tiles cannot be addressed directly on the array.
You must do this via the PSX9 power unit.

For the Elidy-WALL and Elidy-BIG, addressing is factory-configured as follows.

Tip
To define the direction of the frame:
- Female clevis facing upwards
- XLR connector facing downwards



You will therefore only need to access this menu if you need to replace a defective active tile.

On the other hand, if you have received Elidy-Ss, these are all addressed as 1 by default. You will therefore need to differentiate them to make them operate correctly.

Tip
To define the direction of the frame:
- XLR connector facing upwards

Access the SETUP/MAPPING menu, press ENTER.
Doing this starts the procedure for detecting active tiles connected to the PSX9.

DO NOT DISCONNECT THE POWER SUPPLY AT THIS POINT.
DO NOT DISCONNECT THE ACTIVE TILES.

This operation may take a few seconds. Once all the active tiles have been detected, the corresponding number (1 to 9) is displayed directly on the tiles. At the same time, a new window opens on the power unit.

Changing the allocation of Elidy tiles from the PSX9 power unit

The mapping menu appears as follows:

The top row is fixed, this a representation of the 9 tiles which can be detected by the power supply.

The second row is where the cursor moves, it displays the numbers of the tiles detected.

The cursor is moved along the row by means of the + and - keys

The current allocation number is displayed on each tile.
If, for example, all the tiles are allocated the number 1, the LEDs of each tile will display no. 1 and the menu will display:

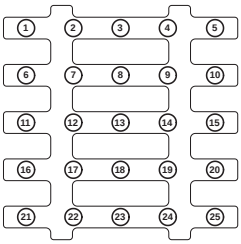
Place the cursor in position 1 and press the ENTER key.
The tile in question flashes once and the menu displays:

Identify the desired allocation number (e.g. 9 if the tile in question is located at the bottom right of an Elidy-WALL). Then increment the number between 1 and 9 and confirm using the ENTER key.

Place the cursor in position 2 and repeat the operation until you have allocated a number to all the tiles connected.

Introduction

This menu lets you determine the DMX (N) address of your Power unit. An active tile has 25 LEDs which are factory-addressed as follows.



Factory allocation of an active tile

N.B.
This order cannot be changed.

On an Elidy-WALL or an Elidy-BIG, there 9 active tiles, i.e. 225 LEDs in total. The address of each active tile will therefore be the following:

N = DMX address of the PSX9 power unit.

DMX address of the PSX9 power unit: N (N=287 max)									
Allocation of Active Tiles (Mapping menu)	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
DMX address of each Elidy-S	**N+1**	**N+26**	**N+51**	**N+76**	**N+101**	**N+126**	**N+151**	**N+176**	**N+201**

You can address 2 Elidy-WALLs or BIGs (2x225 circuits) in one DMX universe. The first Power unit will be addressed as 1 and the next as 226.

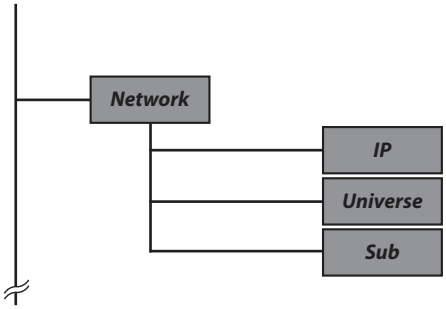
N.B.: N Max = 287

To change the allocation of the PSX9 power unit:

CONTROL / ENTER / ADDR / ENTER.
Give a value between 1 and 287 using the keys + and -
Confirm by pressing ENTER
Then press EXIT twice to exit from the menu.

Tip: Pressing simultaneously on + and - resets the value to 1.

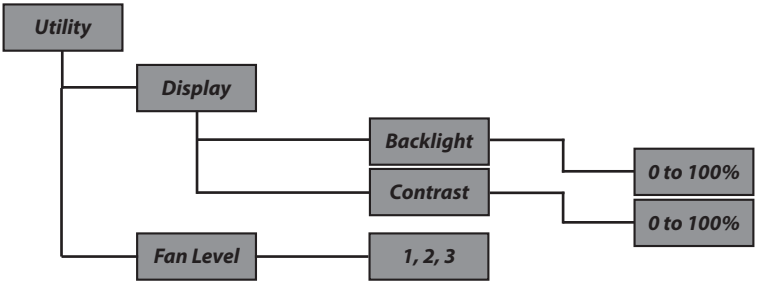
Control/Network menu



The PSX9 power units can be controlled directly via an Artnet signal from a proprietary lighting console or media server.
To do this you have to configure the IP address of the power unit as well as the universe number (0 to 15) and the Subnet number (0 to 15).
You can choose between 256 different DMX universes.
Universe 1 = Universe 0; Subnet 0
Universe 16 = Universe 15; Subnet 15

N.B. The ARTNET standard defines 2 different IP address types:
2.x.x.x
or
10.x.x.x

Utility menu



Screen settings are found in this menu.
The settings are as follows:
- Backlighting, from 0 to 100%.
- Contrast from 0 to 100%.

You can change the speed of the fan.

Technical Specifications

Make-up of the Elidy product range

KITS	*Elidy-S*	*Elidy-WALL*	*Elidy-BIG*
Active Tile	*1*	*9*	*9*
Frame	*-*	*1*	*1*
S-Yoke	*1*	*-*	*-*
Big-Yoke	*-*	*-*	*1*
PSX9	*-*	*-*	*1*

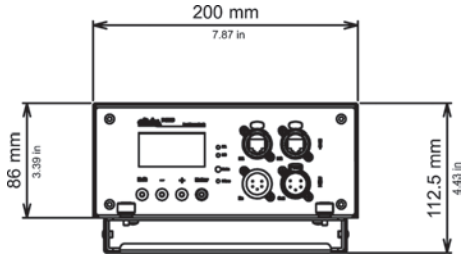
Technical specifications/Ref & Standards

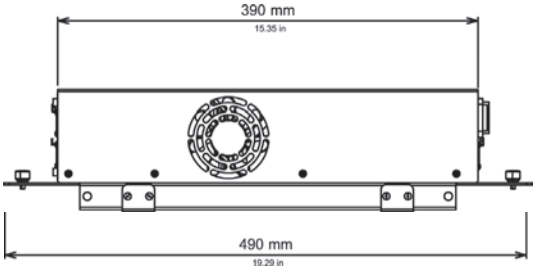
Part numbers and names of products, accessories and spare parts.

Part number	Family	Nom	Name (English)
PX100	Spare Part	Dalle Active	Active Tile
PX101	Product	Elidy-S	Elidy-S
PX102	Product	Elidy-BIG	Elidy-BIG
PX103	Product	Elidy-WALL	Elidy-WALL
PX104	Product	PSX9	PSX9
PX105	Accessory	Dummy	Dummy
PX106	Accessory	Kit de câblage de Elidy-S	Elidy-S cable Kit
PX201	Spare Part	Châssis	Frame
PX202	Accessory	Kit de mise en Rack	Rack Kit
PX203	Accessory	Volets-S	S-Barndoors
PX204	Accessory	Volets-Big	BIG-Barndoors
PX205	Spare Part	Lyre-S	S-Yoke
PX206	Spare Part	Lyre-BIG	BIG-Yoke
PX207	Accessory	Bumper	Bumper
PX301	Accessory	M-Cable	M-Cable
PX302	Accessory	S-Cable	S-Cable
PX305	Accessory	Spider Box	Spider Box
PX401	Accessory	Flight case pour Elidy-BIG & WALL	Flight case for Elidy-BIG & WALL
PX402	Accessory	Flight case pour Elidy-S	Flight case for Elidy-S
PX403	Accessory	Rack 14U pour PSX9	Rack 14U for PSX9
PX404	Accessory	Flight case pour PSX9 & Câble	Flight case for PSX9 & Cable
PX405	Accessory	Flight case pour Bumper	Flight case for Bumper

Technical specifications/Products

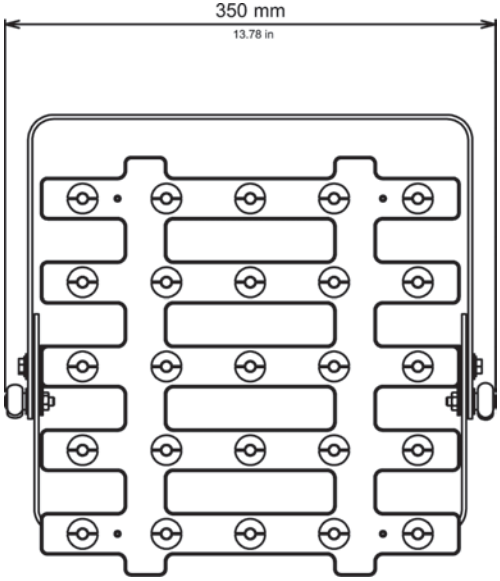
Elidy-PSX9_Power unit PX104

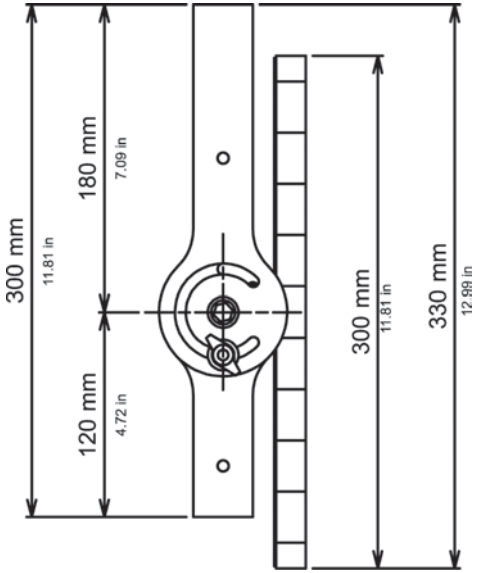




Net weight	3.1 Kg	**Weight with box**	xx Kg	**Power unit**	**Input: 100-230V / 50-60Hz / 3.5A / 800W Output: 48V / 16A / 800W**

Elidy-S PX101

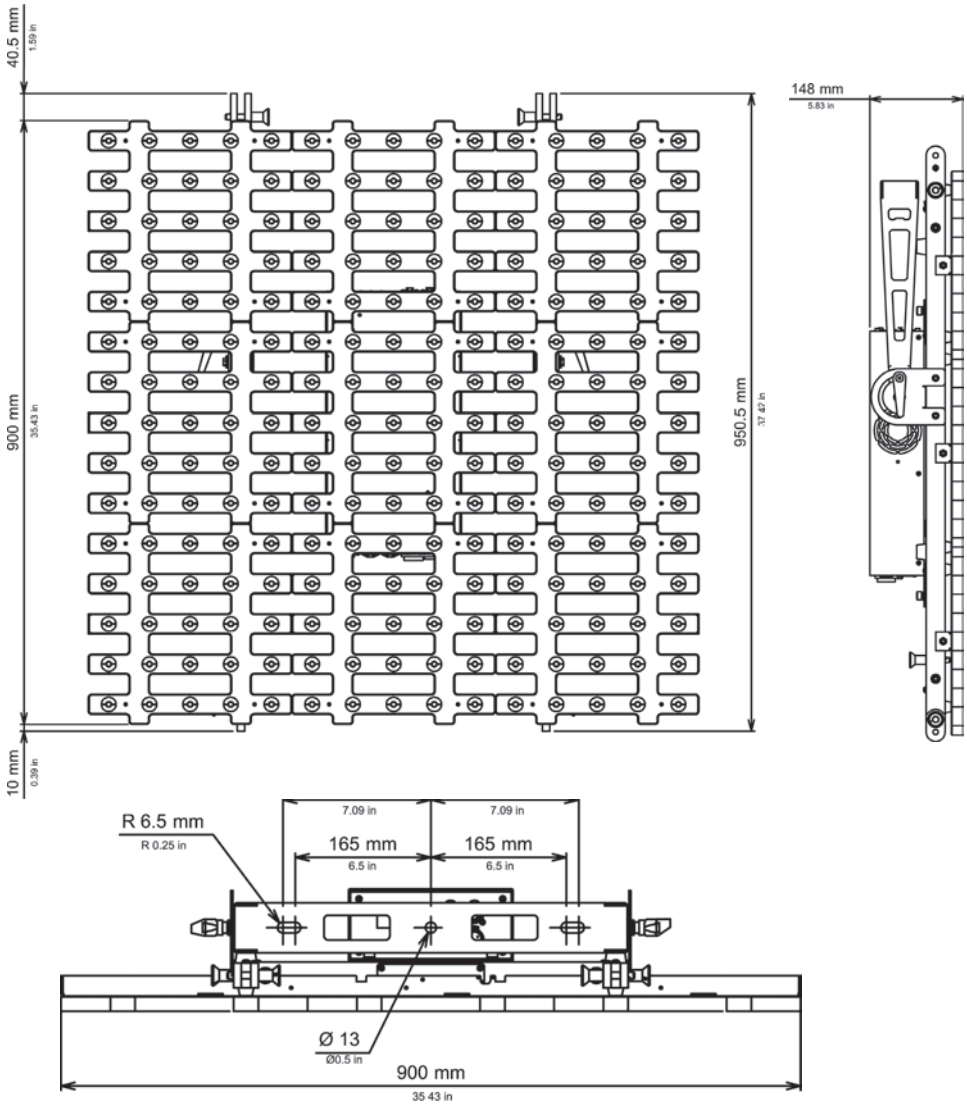




Net weight	3.1 Kg	**Weight with box**	3.55 Kg	**Power unit**	Only on PSX9 - 48VDC/2A

Technical specifications/Products

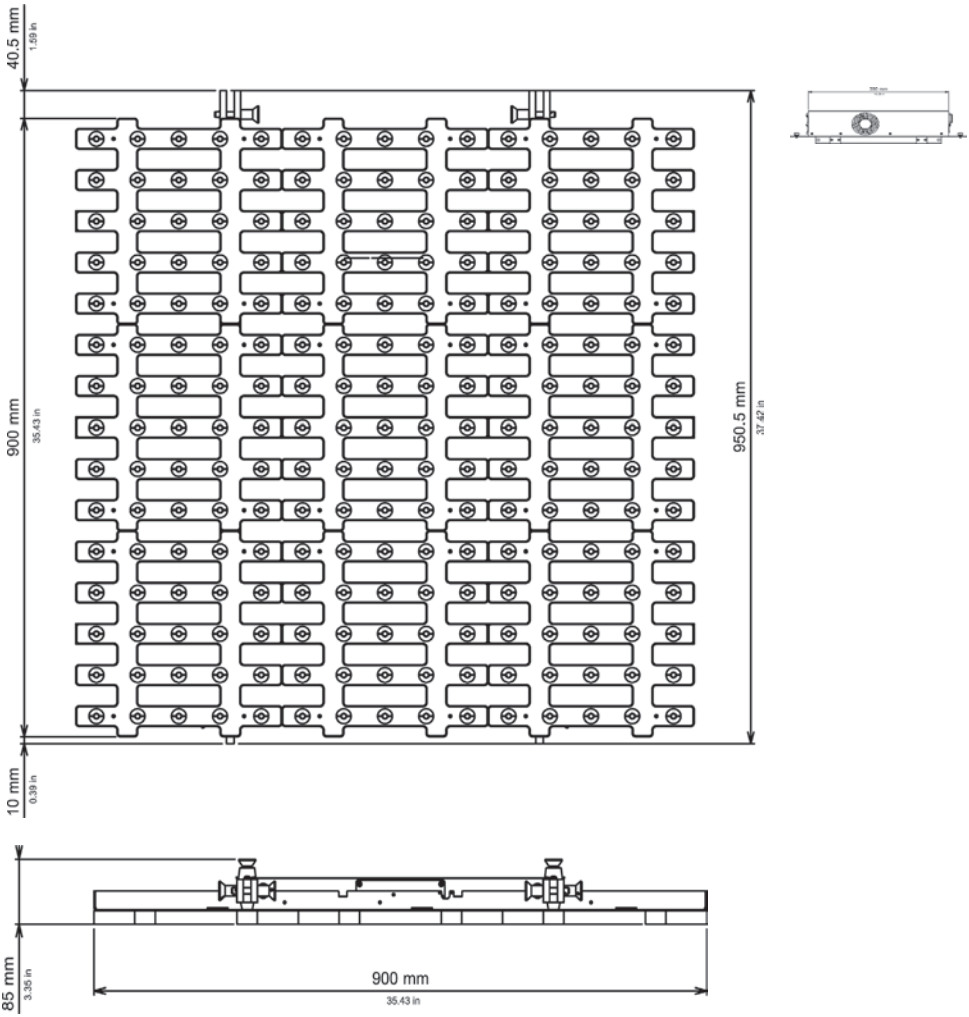
Elidy-BIG **PX102**



Net weight	27.3 Kg	**Weight with box**	30.1 Kg	**Power unit**	Only on PSX9 - 48VDC/16A

Technical specifications/Products

Elidy-WALL PX103



Net weight	21 Kg	**Weight with box**	23.8 Kg	**Power unit**	Only on PSX9 - 48VDC/16A

Technical specifications/Accessories

PX105
Dummy

Accessory for	PX101 - PX102 - PX103
Description	Tile without electronics to increase the surface area artificially or to act as cover support

PX106
Cable kit for Elidy-S

Accessory for	PX101
Description	Minimum kit to supply 9 Elidy-Ss with one PSX9 power unit

PX202
Rack mounting kit

Net weight	0.4 Kg
Accessory for	PX104
Description	Allows 2 PSX9 2Us to be racked

S-Barndoor
PX203

Accessory for	PX101
Description	Barndoors for Elidy-S not available

PX204
BIG-Barndoor

Accessory for	PX102
Description	Barndoors for Elidy-BIG

Technical specifications/Accessories

PX207
Bumper

Net weight	5.5 Kg
Accessory for	PX103
Description	Column rigging system for 11 Elidy-WALLS max., fixed to the frame by 50 mm diameter collar.

PX301
M-Cable

Accessory for	PX101 - PX102 - PX103
Description	Not available

PX302
S-Cable

Net weight	0.5 Kg / m
Accessory for	PX101 - PX102 - PX103
Description	Hybrid power cable, 48V and data, available in 2, 6 and 12 m lengths

PX305
Spider Box

Net weight	0.1 Kg
Accessory for	PX103
Description	"Splitter" x3 for Elidy-S

Technical specifications/Accessories

PX401

Flight case for 6 Elidy-WALLs or 3 Elidy-BIGs

Accessory for	PX103

PX402

Flight case for 9 Elidy-Ss, 1 PSX9, Cables

Accessory for	PX101

PX403

Rack 14U for 12 PSX9s

Accessory for	PX104

PX404

Flight case for 8 PSX9s and Cables

Accessory for	PX104

PX405

Flight case for 9 bumpers

Accessory for	PX103

Technical specifications/Spare parts

PX100
Active tile

Net weight	1.45 Kg
Description	Component of all products

PX201
Frame

Net weight	6.35 Kg
Description	Component of PX102 and PX103

PX205
S-Yoke

Net weight	1.65 Kg
Description	Component of PX101

PX206
BIG-Yoke

Net weight	2.4 Kg
Description	Component of PX102

WARRANTY

Scope of the warranty

Equipment is guaranteed against faulty materials and manufacturing faults for 1 (one) year from the date of delivery subject to written notification that a fault has occurred being sent to CHROMLECH within 15 (fifteen) days.

If the equipment is repaired, the repairs will be carried out by CHROMLECH or one of its subcontractors. Only CHROMLECH has the authority to appoint the repairer.
If CHROMLECH carries out repairs and/or replaces a part or the equipment during the guarantee period, the original guarantee period is not extended.

CHROMLECH has sole authority for deciding what action should be taken under the terms of this guarantee, in particular:

- whether the equipment should be repaired on the customer's site or
- whether the equipment should be returned by the customer to CHROMLECH so that it can be repaired.

Under the terms of the warranty, the customer is liable for any risks and transport costs and may not claim for any losses due to the equipment being unavailable while under guarantee.

Exclusions

This warranty does not apply to visible faults.

The warranty is not valid in the following circumstances:

- failure to comply with the recommendations for using and maintaining the equipment
- abnormal use of the equipment
- errors in operating the equipment
- failure to maintain the equipment
- repairs carried out by a third party without authorisation from CHROMLECH

This warranty also excludes:

- components with a life-time in normal use that is less than the warranty period
- replacement of consumables
- wear parts (in particular lamps, filters, gobos, flight case)
- faults and their consequences resulting from external causes

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